

REMARKS

Claims 7-38 are pending. Claims 7, 17, 25, and 38 have been amended. These amendments are supported at least by the specification in page 5, lines 7-11. No new matter has been added.

Claim Rejections -- 35 U.S.C. §112, first paragraph

Applicants respectfully traverse the rejections of claims 7-38 under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the enablement requirement.

Claims 7, 17, and 25 have been amended to recite that only a portion of the two or more glycidyl groups and/or isocyanate groups of the reactive compound (II) is reacted with the amorphous polyester resin (I). Also, claim 38 has been amended to recite reacting an amorphous polyester resin (I) with a portion of two or more glycidyl groups and/or isocyanate groups per molecule contained in a reactive compound (II). The amendments are supported at least by the specification in page 5, lines 7-11, which states “all of the above problems can be solved by kneading in advance an amorphous polyester (I) and a reactive compound (II) containing two or more glycidyl groups and/or isocyanate groups per one molecule and having a weight average molecular weight of not less than 200 and not more than 500 thousands to **react a part of them** to obtain a modifier.” An ordinary skilled in the art would have understood that “them” in the sentence refers to “two or more glycidyl groups and/or isocyanate groups” since it would be clear that “them” would not refer to “thousands” and that “them” refers to the preceding plural nouns “glycidyl groups and/or isocyanate groups.”

The Office Action states in page 5, lines 3-6, that “the specification is sufficiently vague to include compositions wherein only a portion of all molecules making up (I) are reacted with (II) and compositions wherein all molecules making up (I) react with (II), but wherein only a portion of functional groups within a multifunctional molecule are reacted.” The current amendments have made clear that present claims encompass the latter.

The Office Action states that Examples 1 and 10 do not appear to involve a partial reaction of any sort (see Office Action, page 5, line 14; page 6, line 6). Applicants respectfully disagree. Examples 1 and 10 are working examples instead of comparative examples. Reading Examples 1 and 10 together with the disclosures in page 5, lines 7-11 (discussed above), one of

ordinary skill in the art would have understood that the Examples disclose a condition under which a portion of the glycidyl groups and/or isocyanate groups of the reactive compound (II) was reacted with the amorphous polyester resin (I). Therefore, the Examples would have enabled an ordinary skilled in the art to make and use the claimed invention. Furthermore, since the specification teaches a process of making and using the claimed invention, the specification must be taken as enabling unless there is a reason to doubt the objective truth of the statements in the application that enablement depends on. See MPEP 2164.04. Here, the Office Action fails to establish the reason to doubt the presumed accuracy of the specification.

A composition in which a portion of two or more glycidyl groups and/or isocyanate groups of a reactive compound (II) is reacted with an amorphous polyester resin (I) has the following three features: Feature α , increased molecular weight compared with the reactive compound (II) alone; Feature β , increased affinity for an amorphous polyester resin (III) and/or a crystalline polyester resin (IV) compared with the reactive compound (II) alone; and Feature γ , the glycidyl groups and/or isocyanate groups of the reactive compound (II) that remain would react with an amorphous polyester resin (III) and/or a crystalline polyester resin (IV).

A person of ordinary skill in the art would readily understand that a composition in which a portion of the two or more glycidyl groups and/or isocyanate groups of a reactive compound (II) is reacted with an amorphous polyester resin (I) would have Feature α because the composition would include some molecules of the amorphous polyester resin (I) in addition to the molecules of the reactive compound (II). Feature β would also readily be understood because the amorphous polyester resin (I) bound to the reactive compound (II) is the same type of polyester as the amorphous polyester resin (III) or the crystalline polyester resin (IV). An ordinary skilled in the art would also readily understand Feature γ , considering the unique nature of glycidyl groups and/or isocyanate groups.

In the polyester resin compositions of claims 7 and 17, an amorphous polyester resin (I) and a reactive compound (II), in which only a portion of the two or more glycidyl groups and/or isocyanate groups of the reactive compound (II) is reacted with the amorphous polyester resin (I), are dispersed substantially uniformly (due to Feature β) and stably reacted with an amorphous polyester resin (III) or a crystalline polyester resin (IV) (due to Features α and γ). Since one of ordinary skill in the art would readily understand Features α , β , and γ , one of ordinary skill in the art would also understand that the claimed polyester resin compositions

would have excellent strength. As such, an ordinary skilled person could readily test the products of the Examples in the present application for the effects of the claimed polyester resin compositions (e.g., excellent strength) to confirm that the specification provides an enabling disclosure.

Further testing the products of the Examples of the present application would also show no gelation during molding, supporting a conclusion that the Examples teach making and using the claimed polyester resin compositions in which a portion of the two or more glycidyl groups and/or isocyanate groups of a reactive compound (II) was reacted with an amorphous polyester resin (I). If none of the two or more glycidyl groups and/or isocyanate groups of the reactive compound (II) was reacted with the amorphous polyester resin (I), mixing the composition comprising the amorphous polyester resin (I) and the reactive compound (II) further with an amorphous polyester resin (III) (and/or a crystalline polyester resin (IV)) is equivalent to directly mixing (I), (II), and (III) (and/or a crystalline polyester resin (IV)) together, which would cause gelation during molding (see page 14, line 27 to page 15, line 5 of the specification). On the other hand, if all of the two or more glycidyl groups and/or isocyanate groups of the reactive compound (II) were reacted with the amorphous polyester resin (I), immediate gelation would occur so that the composition comprising (I) and (II) having reacted with each other could no longer be mixed with an amorphous polyester resin (III) and/or a crystalline polyester resin (IV). Testing of the polyester resin compositions of the present Examples would reveal no gelation, suggesting that only a portion (i.e., more than 0% but less than 100%) of the two or more glycidyl groups and/or isocyanate groups of the reactive compound (II) was reacted with the amorphous polyester resin (I) in the compositions of the Examples. Therefore, the specification would have enabled an ordinary skilled in the art to make and use the claimed polyester resin compositions without undue experimentation.

Applicants note that it is important that only a portion (i.e., more than 0% but less than 100%) of the two or more glycidyl groups and/or isocyanate groups of the reactive compound (II) is reacted with the amorphous polyester resin (I) in the claimed compositions. What proportion “the portion” constitutes is not important.

For at least the foregoing reasons, claims 7-38, as amended, comply with the enablement requirement under 35 U.S.C. §112, first paragraph. Withdrawal of the rejections is respectfully requested.

Claim Rejections -- 35 U.S.C. §112, second paragraph

Applicants respectfully traverse the rejection of claims 7-38 as being indefinite under 35 U.S.C. § 112, second paragraph.

The Office Action states that it is unclear what type of partial reaction the phrases “reacted partially with” and “partially reacting” in previously presented claims 7, 17, 25, and 38 refer to. Without conceding to the propriety of this rejection and in order to expedite prosecution, claims 7, 17, and 25 have been amended to recite that only a portion of said two or more glycidyl groups and/or isocyanate groups of said reactive compound (II) is reacted with said amorphous polyester resin (I). Also, claim 38 has been amended to recite reacting an amorphous polyester resin (I) with a portion of two or more glycidyl groups and/or isocyanate groups per molecule contained in a reactive compound (II). Accordingly, Applicants respectfully submit that claims 7-38 are in compliance with the definiteness requirement of 35 U.S.C. § 112, second paragraph. Withdrawal of the rejections is respectfully requested.

CONCLUSION

The Examiner is encouraged to contact the undersigned regarding any questions concerning this amendment. In the event that the filing of this paper is deemed not timely, applicants petition for an appropriate extension of time. The Commissioner is authorized to debit Deposit Account No. 11-0600 the petition fee and any other fees that may be required in relation to this paper.

Respectfully submitted,
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